



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/586,163

07/14/2006

Kunihiro Fushimi

MEM-001

5626

32628

7590

11/20/2009

KANESAKA BERNER AND PARTNERS LLP
1700 DIAGONAL RD
SUITE 310
ALEXANDRIA, VA 22314-2848

EXAMINER

YAGER, JAMES C

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

11/20/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/586,163	Applicant(s) FUSHIMI ET AL.	
	Examiner JAMES YAGER	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendment filed 06 July 2009 has been entered. Claims 1-3 are currently pending in the application. The rejections of record from the office action dated 10 April 2009 not repeated herein have been withdrawn.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-3 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. While there is support to recite that the vapor deposition layers have thicknesses in the range of 50 to 3000 nm, there does not appear to be support to recite that the vapor deposition layers have thicknesses in the range of 50 to 3000 μm .

Art Unit: 1794

4. Claims 1-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the phrase “hardened coating film” renders the claim indefinite because it is unclear how hard the film must be to be considered “hardened”

Regarding claim 2, the phrase “the two vapor deposition layers are silica layers and titanium layers arranged alternately more than two layers, respectively” renders the claim indefinite because it is unclear what is meant by this phrase. How can two layers be arranged alternately into more than two layers? Does this mean that alternatively, there are more than two layers (i.e. optionally more than two layers)? Respectively to what? For purposes of this office action, this phrase will be interpreted to mean that optionally there are more than two layers.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

Art Unit: 1794

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spiro et al. (US 6,534,903) in view of Kimura et al. (US 6,228,480).

Regarding claims 1-3, Spiro discloses a glass reflector for a lamp (i.e. a glass vessel, comprising a base vessel) (C2/L25-30) comprising vapor deposited coatings (i.e. comprising a multilayer film composed of two vapor deposition layers, wherein the two vapor deposition layers comprises a first layer and a second layer which covers the first layer, the first and second layers being sequentially provided on at least one of an external surface and an internal surface, of the base vessel) (C3/L55-65) comprising alternating layers of titania and silica (i.e. whose refractive indices differ from each other; wherein the multilayer film alternately contains two types of vapor deposition layers whose refractive indices differ from each other by 0.1 or more; wherein the first

Art Unit: 1794

layer has a refractive index lower than a refractive index of the second layer, and contains at least one layer selected from the group consisting of a silica layer; wherein the second layer contains a titanium layer; wherein the two vapor deposition layers are silica layers and titanium layers arranged alternately more than two layers respectively (C8/L1-5), wherein the thicknesses of each layer is 20 to 10,000 Angstroms (2-1000 nm or 2,000-1,000,000 μm) (i.e. clearly overlapping wherein the multiple vapor deposition layers have respective thicknesses in a range of 50 to 3,000 μm) (C5/L35-45)

Given that there may be between two and one hundred layers (C5/L25-31), it is the examiners position that there may be more than two layers respectively (i.e. arranged alternately more than two layers respectively).

Given that the reflector of Spiro is identical in structure and composition to the instantly claimed vessel, it is the examiner's position that the reflector of Spiro will inherently be a multicolor glass vessel.

Spiro does not disclose a hardened coating film interposed between the base vessel and the multilayer film wherein the hardened coating film comprises at least one material selected from the group consisting of polysiloxane-based resin, melamine resin, phenol resin, urea resin, guanamine resin and derivatives thereof wherein the hardened coating film has a thickness in a range of about 1 to 100 μm .

Kimura discloses a glass substrate having a metal oxide coating and an adhesive layer between the metal oxide and the glass comprising polysiloxane having a thickness of 0.1 μm or more and specifically may be 1 μm , 5 μm or 10 μm (i.e. a hardened coating film interposed between the glass substrate and the multilayer film wherein the

Art Unit: 1794

hardened coating film comprises at least one material selected from the group consisting of polysiloxane-based resin; clearly overlapping wherein the hardened coating film has a thickness in a range of about 1 to 100 μm) (abstract, C4/L5-10, C6/L25-30, Table 1). Kimura further discloses that when the adhesive layer comprises polysiloxane, the structure exhibits improved adhesive property and durability (C4/L65-C5/L5).

Spiro and Kimura are analogous art because they both teach about metal oxide layers adhered to glass substrates. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the adhesive layer comprising polysiloxane into the reflector of Spiro to provide a reflector having improved adhesive property and durability.

Response to Arguments

9. In light of the amendments to the claims, the rejections using Nishizawa have been withdrawn.

10. Applicant's arguments filed 06 July 2009 have been fully considered but they are not persuasive.

Applicant argues that the object and intent of Spiro are different than those of the instant invention.

Regardless of the object and intent of Spiro, as set forth above, modified Spiro discloses a multicolor glass vessel as claimed in claims 1-3. therefore, the rejection is maintained.

Applicant argues that the orientation of the low and high refractive index vapor deposition coatings of Spiro are different than the instant vapor deposition layers.

Given that the instant claims broadly recite first and second layers and do not require any specific orientation of the layers other than that they are alternating, it is the examiner's position that modified Spiro meets the limitations of claims 1-3.

Applicant argues that Spiro does not disclose the hardened coating film with a predetermined thickness comprising the specific resins between the surface of the base glass and the multilayer film.

Examiner agrees that Spiro does not disclose the hardened coating film, which is why Kimura is used to teach this limitation.

Applicant argues that Spiro teaches away from using a hardened coating film because the infrared spectrum and visible light has to be reflected.

Applicant's argument is not persuasive because it is not clear where Spiro requires that infrared spectrum and visible light must be reflected.

Additionally, it is noted that "the arguments of counsel cannot take the place of evidence in the record", *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). It is the examiner's position that the arguments provided by the applicant regarding whether the hardened coating film would prevent infrared spectrum and visible light from being reflected must be supported by a declaration or affidavit. As set

Art Unit: 1794

forth in MPEP 716.02(g), "the reason for requiring evidence in a declaration or affidavit form is to obtain the assurances that any statements or representations made are correct, as provided by 35 U.S.C. 24 and 18 U.S.C. 1001".

Applicant argues that Kimura does not teach multiple vapor deposition layers whose refractive indices differ from each other are alternatively laminated in a predetermined order as claimed.

Note that while Kimura does not disclose all the features of the present claimed invention, Kimura is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely a hardened coating film interposed between the glass substrate and the multilayer film wherein the hardened coating film comprises at least one material selected from the group consisting of polysiloxane-based resin, and in combination with the primary reference, discloses the presently claimed invention.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES YAGER whose telephone number is (571)270-3880. The examiner can normally be reached on Mon - Fri, 7:30am-5pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1794

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JY 11/11/09

/Rena L. Dye/
Supervisory Patent Examiner, Art Unit 1794